

## Claims

1. Lids for closing off containers using a sealing seam in which the lids contain a substrate material featuring, with respect to a container on which the lids are used, outward facing printing and an inward facing sealing layer,  
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characterised in that,  
  
the sealing layer on the free surface exhibits embossing with a depth of roughness of  
10 up to 50  $\mu\text{m}$  and the free surface of the substrate material showing the printing is smooth and is not embossed.
2. Lids according to claim 1, characterised in that the depth of roughness is 3 to 30  $\mu\text{m}$ , usefully 3 to 20  $\mu\text{m}$ , advantageously 5 to 10  $\mu\text{m}$ .  
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3. Lids according to claim 1, characterised in that the sealing layer is an extrusion layer.
4. Lids according to claim 1, characterised in that the sealing layer is a co-extrusion layer.  
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5. Lids according to claim 1, characterised in that the sealing layer is a co-extrusion layer contains a bonding agent and/or a primer and a sealable thermoplastic.
6. Lids according to claim 5, characterised in that the sealing layer contains sealable  
25 thermoplastics from the polyolefin series, preferably polyethylenes or polypropylenes, copolymers or terpolymers of ethylene or polyester or polystyroles or polyamides or their copolymers or terpolymers.
7. Lids according to claim 1, characterised in that the substrate material contains non-  
30 embossed thermoplastics or a non-embossed cellophane or a non-embossed cellulose-containing material or a non-embossed metal foil or a combination of these materials.
8. Lids according to claim 7, characterised in that the substrate material containing a  
35 combination of at least one thermoplastic and/or a cellophane and/or a cellulose-containing material and/or a metal foil in the form of a multi-layer non-embossed composite material.

9. Lids according to claim 8, characterised in that the substrate material contains a barrier layer against gases, vapours and moisture in the form of a ceramic layer or a metallised layer or a plastic film or a metal foil.
- 5 10. Lids according to claim 8, characterised in that the sealing layer exhibits a weight per unit area of  $30 \text{ g/m}^2$  and less, usefully from 2 to  $20 \text{ g/m}^2$ , advantageously from 2 to  $15 \text{ g/m}^2$ , in particular from 5 to  $10 \text{ g/m}^2$ .
- 10 11. Lids according to claim 10, characterised in that the sealing layer is a co-extrudate containing a bonding agent in the form of an extrusion layer having a weight per unit area of 2 to  $10 \text{ g/m}^2$ , usefully from 2 to  $8 \text{ g/m}^2$ , and an extrusion layer of thermoplastic having a weight per unit area of 3 to  $25 \text{ g/m}^2$ , in particular from 5 to  $10 \text{ g/m}^2$ .
- 15 12. Process for manufacturing lids for closing off containers using a sealing seam, where the lids contain a substrate material featuring, with respect to a container on which the lids are used, an outward facing printing and an inward facing sealing layer,
- characterised in that,
- 20 the substrate material is coated via an extrusion coating or co-extrusion coating with an extrusion layer or co-extrusion layer forming the sealing layer, and the coated substrate material is passed between a pressure roll and a cooling roll while being put under pressure, whereby the substrate material faces the pressure roll and the extrusion layer or co-extrusion layer faces the cooling roll, and the configuration of
- 25 the surface of the cooling roll transfers to the extrusion layer or co-extrusion layer as a reverse image forming an embossed sealing layer.
13. Process for manufacturing lids according to claim 12, characterised in that the cooling layer exhibits as surface configuration a roughness pattern having a depth of
- 30 roughness of up to  $50 \text{ }\mu\text{m}$ , usefully from 3 to  $30 \text{ }\mu\text{m}$ , advantageously from 3 to  $20 \text{ }\mu\text{m}$ , in particular 5 to  $10 \text{ }\mu\text{m}$ .